CULTURAL RESOURCES REPORT

Waldo Canyon Fire

Incident # CO-PSF-0000728

July 17, 2012
PSICC, Pike National Forest

TECHNICAL SPECIALIST REPORT – BURNED AREA EMERGENCY RESPONSE

Resource: Cultural Resources
Fire Name: Waldo Canyon Fire
Month/Year: June-July 2012
Field Personnel Name/Title:
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I. Resource Condition Assessment

A. Introduction

Research has shown that wildfires clearly have the potential to damage or destroy heritage resources through: (1) direct effects of the fire; (2) ground disturbing suppression or rehabilitation activities; and/or (3) erosive soil movement caused by subsequent storm precipitation. These impacts may completely destroy historic and archaeological resources or alter the context of surface and subsurface cultural remains vital to any scientific analysis or interpretation. Also, wildfires may have an indirect effect, such as increase the accessibility and visibility of archaeological site locations, making them more susceptible to vandalism/artifact looting and unauthorized recreational activity. The Waldo Canyon Fire has the potential to directly or indirectly impact cultural resources located in the area.

B. Assessment Objective

Forest Service Manual (FSM 2523.02) provides for the treatment of cultural resources as part of BAER, stating "...implement emergency treatments ...to stabilize and prevent unacceptable degradation to critical ...cultural resources." Consideration of potential effects of emergency stabilization measures on heritage sites is also an appropriate BAER activity (FSM 2523.02). "Where programmatic agreements have been developed for the purposes of National Historic Preservation Act compliance with BAER activities; those agreements will direct heritage resource considerations" (BAER Guidance Paper, 2004).

Specific objectives of this report are:

- identify the "Area of Potential Effect" (APE)
- identify heritage resources within the Waldo Canyon Fire APE
- summarize field reconnaissance of *at risk* sites
- analyze direct and indirect effects of the fire to those sites

- recommend actions to protect known Class I and Class II Heritage Resources Sites from fire related effects

Class I Heritage Resource Sites are defined as those historic or prehistoric resources officially determined eligible to the National Register of Historic Places (NRHP) per criteria 36 CFR 60.4. Also, Forest Service Manual (FSM) 2361 direction states that Class II sites, which are classified as heritage resource sites whose NRHP status is unknown or unevaluated, be afforded the same consideration and protection as Class I sites. Class III sites are those that have been evaluated and been officially found to be ineligible for listing in the NRHP.

C. Area of Potential Effect

In the selection of the "Area of Potential Effect" (APE), the combined perimeter of the fire burn area, locations of treatment actions, and areas potentially impacted by indirect fire effects (i.e., flooding, debris flows, etc.) were reviewed by cultural resource staff with the aid of other resource specialists (i.e., hydrologist, soil scientist, etc.). After an in depth review of potential direct and indirect post-fire effects, the cultural resource impact analysis APE was restricted to: the area within the fire perimeter within National Forest lands. Some areas of potential effect downslope from major headwaters did not form part of the assessment, due to being located outside of National Forest lands. The major headwaters that formed part of the BAER analysis are: Fountain Creek, Cascade-Fountain Creek, Garden of the Gods, Lower Monument Creek, and West Monument Creek.

II. Summary of Findings

A. Background Research Findings

The preliminary archival research in response to the immediate need for cultural resource fieldwork to support the BAER analysis initially consisted of a review of the Pike-San Isabel Forest, Cimarron-Comanche Grassland's (PSICC) database, as well as the Colorado State Historic Preservation Office heritage database known as "COMPASS".

Previous Survey

A review of these databases indicated that most of the fire perimeter has not been previously surveyed. Only about a quarter of the APE has been surveyed to current professional standards. Much of the area surveyed was located south of Rampart Range Road, the Ormes Peak and Devil's Kitchen area, the southeastern slope of Blodgett Peak, and other smaller surveys in the middle of the fire perimeter, south of Ormes Peak.

The archival research determined that the APE may contain potentially undiscovered cultural resources. However, a review of the survey coverage made evident that the areas considered to be of high potential for the presence of cultural resources (i.e. drainages and along historic Rampart Range Road, Ormes Peak and Devil's Kitchen area) had already been surveyed for the presence of cultural resources. Much of the APE is very rugged with very steep slopes. Thus, the likelihood of finding new cultural resources was expected to be moderate to low.

Previously Recorded Sites

A review of the above mentioned databases indicated there were 4 known Class I ("Eligible") resources, 8 known Class II ("Needs data") resources, and 9 Class III ("Not Eligible") resources within the APE, for a total of 21 previously recorded sites. In addition, a review of the above mentioned databases indicated there were 20 known Isolated Finds. Isolated Finds are Class III resources.

The cultural sites and Isolated Finds previously recorded within the APE are listed below by Class category:

Class I: 5EP.6845, 5EP.6847, 5EP.6848, 5EP.6855

Class II: 5EP.353.9, 5EP.6849, 5EP.6850, 5EP.6851.1, 5EP.6851.2, 5EP.6851.3, 5EP.6851.4, 5EP.6844

Class III: 5EP.353, 5EP.1248, 5EP.1249, 5EP.2086, 5EP.5809, 5EP.6612, 5EP.6839, 5EP.6841, 5EP.6843, 5EP.6846, 5EP.6856, 5EP.6862, 5EP.6863, 5EP.6864, 5EP.6865, 5EP.6867, 5EP.6868, 5EP.6869, 5EP.6870, 5EP.6873, 5EP.6874, 5EP.6875, 5EP.6876, 5EP.6877, 5EP.6878, 5EP.6879, 5EP.6880, 5EP.6885, 5EP.6887

Unrecorded Sites

As part of the background research, historic Forest and USGS maps and surveys in progress were consulted in order to determine the presence of unrecorded historic resources within the fire perimeter.

Through this exercise, we identified 4 historic sites within the burn perimeter that had been field recorded as part of a Forest Special Use Permit undertaking. Because these sites still had not been formally recorded, this report references their temporary numbers: temp#RHT-01, temp#RHT-02, temp#RHT-03, and temp#RHT-04.

Through this background research exercise we also identified that various system roads (FSRs 301, 302, 303, 306, 310A, and 300S) and non-system trails in the fire perimeter have a historic presence.

B. On-the-Ground Findings

FSM direction states that all known Class II sites be afforded consideration and protection as Class I sites. While visiting cultural resources within the burn area to determine possible emergency stabilization/protection measures, one new cultural resource Isolated Find (IF), a prehistoric flaked cutting tool / Class III site, was discovered. Also, one newly discovered Class II site (a chimney/BBQ/furnace structure with associated road and structure platform) and many features associated with Rampart Range Road/FSR 300 (such as culvert head-gates, older road cuts above and below FSR 300) were witnessed within the APE.

Although all the previously identified cultural resource sites within the APE were considered, only the Class I sites (or sites to be afforded the same treatment as Class I sites) had their condition assessed on-the-ground. Therefore, twelve of the 21 previously recorded sites within the APE were inspected and had their values at risk assessed in the field. In addition, the four field-recorded sites, the one newly discovered Class II site, and the unrecorded historic roads had their values at risk assessed in the field.

III. Emergency Determination

The objective of this report is to reduce damage to significant cultural resources due to post-fire effects such as increased runoff, erosion, and debris flows resulting from the effects of damaging events (i.e., storms) as well as from the emergency treatment measures themselves.

Primary concerns about damage to significant cultural resources for the BAER effort focuses on ground disturbance activities which may directly impact known or unknown cultural resources, the potential to bury surface and subsurface cultural resources to prohibit discovery, and the possibility of soil movement which would change the context of the remains which would be vital to any scientific analysis or interpretation value that the resource may have. The burn may also have the indirect impact of increasing the visibility of site locations to make them more susceptible to vandalism. It is assumed the same effects would hold true for any unknown cultural resources within the burn perimeter.

The data recovered during the field inspections identified one cultural resource as immediately threatened. Site 5EP6847 (a Class I site) has its values at risk due to water flow/erosion in two drainages that hold artifact concentrations. Although the site had its wooden features burnt in the fire, the site's cultural value lies in its potential to yield more information important in history (NRHP Criterion D). Analysis of the soils at the artifact concentrations burnt over identified a water repellency of 2 inches depth. The water-repelling action of the burnt soils in combination with the slope wash and the lack of vegetation may cause the loss of this information potential and puts the site's value at risk.

Another concern for site 5EP6847 is looting, since the vegetation that once hid much of these artifact concentrations is now gone and given that the site is located on the edge of a system road, with artifacts visible from the roadbed itself. Mitigative treatment at this site would need to take place in order to protect the cultural resource values at risk. Cultural Resource sites are a non-renewable resource. If no action is taken to protect the sites, valuable historical and scientific information could be lost.

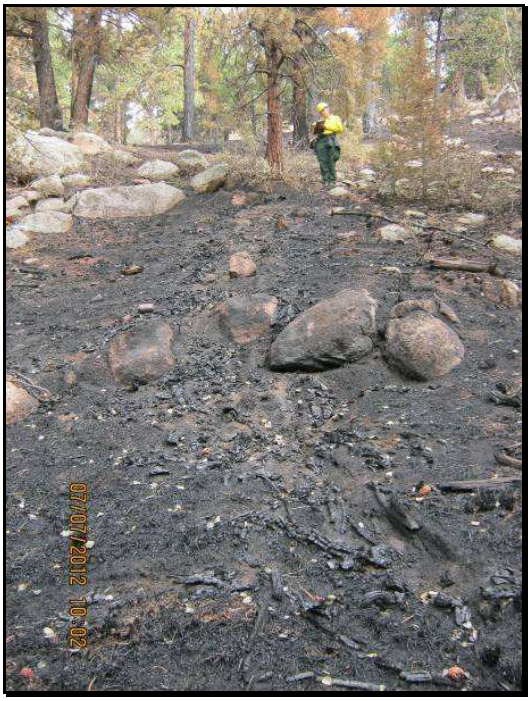
IV. Treatments to Mitigate the Emergency

Among the qualifying sites that were monitored for fire effects, only the following was found to have values at risk:

Site 5EP6847

A. Site Type

Historic mining site dated to 1890-1915 that consists of 17 features including four platforms, four depressions, three prospect pits, mine shaft, corral, cabin ruins, log pile, and wagon road. In addition, there are three artifact concentrations with possible subsurface deposits. Much of the site is on side slopes and bisected by seasonal drainages.



Site 5EP6847, artifact concentration 4, erosion and burn damage, view NW (figure 4126-606, 07/07/2012)

B. Values at Risk

The site had been determined officially eligible to the national register of historic Places due to its potential to yield more information important in history (Criterion D). Three artifact concentration features of the site were found to be at risk of being displaced due to erosion or looted. This could result in the loss of important scientific information.

C. Treatment Type

Cover artifact concentrations at risk with wood straw

D. Treatment Objective

Mulch provides immediate ground cover and helps reduce surface erosion as well as hides the artifacts from view. This treatment provides protection to heritage sites from erosion and looting. Monitoring will dictate whether additional treatments are necessary.

E. Treatment Description

Aerial mulching with wood shred would be applied to the southern half of the site, in order to ensure ground cover of the artifact concentration areas.

Site 5EP6847, overview of new artifact concentration exposed by fire, view E (frame A126-603, 07/07/2012)

For the Waldo Canyon Fire, cultural resource site treatment effectiveness monitoring shall take place after a significant precipitation event to determine if mulching objectives were met. It shall consist of surface inspection transects to determine if there is still adequate soil cover from mulch treatment and photo documentation.

Effectiveness monitoring shall also take place once a month, until the area has been naturally covered by snow or vegetation growth in order to determine if vandalism and looting protection measures are being met.

F. Treatment and Implementation Monitoring Needs

No needs. The site's treatment area will be within a BAER aerial mulching treatment unit established for watershed response mitigation.

V. Treatment Effectiveness Monitoring Plan

Guidance in Forest Service Manual (FSM 2523.3) provides that "monitoring is done to verify the implementation of emergency stabilization treatments and observe the site-specific effectiveness and functioning of treatments in order to determine if additional treatments are needed." BAER identifies two types of monitoring: implementation and effectiveness.

For the Waldo Canyon Fire cultural resource site treatments, implementation monitoring shall take place immediately after implementation. It shall consist of

visiting the site to determine to determine if mulching objectives were met and photo documentation of treatments.

Implementation monitoring shall answer:

- whether the aerial mulching was implemented as designed;
- how much mulch covered the artifact concentrations at risk.

Since some treatment measures may have a risk of failure. It may be necessary to monitor the effectiveness of the treatments in providing the appropriate protection for the heritage values at risk. For the Waldo Canyon Fire, cultural resource site treatment effectiveness monitoring shall take place after a significant precipitation event and once a month after that. It shall consist of inspection of artifact concentrations and photo documentation.

Effectiveness monitoring shall answer:

- whether erosion is evident within the site;
- what percentage of mulch cover remains on the features at risk;
- whether natural vegetation is recovering;
- whether the mulch is effectively stabilizing the artifacts;
- whether looting is occurring.

VI. Heritage Resource Compliance Procedures for Prescriptions

Proposed BAER treatments must give consideration to heritage resource values prior to project implementation. A surface survey of 25 square meters was undertaken at the location of one BAER treatment proposal. The survey consisted of an intensive surface inspection of the location where Rampart Range Road and FSR 303 meet was undertaken due to the possibility of ground disturbance from the installation of a gate. No cultural resources were found.

The other proposed BAER treatment proposals were not of concern. Straw and wood aerial mulching is a non-ground disturbing site protection measure that will decompose over time, as natural vegetation regenerates. Installation of temporary warning signs and temporary road closures for public safety along existing and actively maintained roadways, as well as culvert cleaning, fall within regular road maintenance work and were not of concern either.

At this time, we have no knowledge of any other proposed treatments by other specialists (hydrologists, soil scientists, botanists, geologists) that may adversely affect the known cultural resources within the APE.

If cultural resources are encountered during project implementation, all work on the site shall cease and the archaeologist shall make a determination as to how to proceed.

VII. Discussion/Summary/Recommendations

The BAER team identified one cultural resource site **(5EP68947: Class I)** in the moderate severity soil burn area of the Waldo Canyon Fire that is now at risk of hill slope erosion and looting. Thus, the site is at risk of loss of integrity and information potential. Emergency treatment is needed on this site to protect its values at risk. Emergency measures for the qualifying site includes aerial mulching as a vegetative ground stabilization and coverage technique. Cultural resource sites are a non-renewable resource. If no action is taken to protect the site, valuable historical and scientific information could be lost. This treatment must be implemented before the next damaging storm.

The BAER team also identified one additional site (**temp#RHT-03: Class II)** already being affected by post-fire erosion effects. Although this historic trail is not at risk of being lost, two spots uphill from this trail could benefit from manually spreading weed-free straw mulch along the hill slope. One area measures about 150 feet uphill x 40 feet wide. The other area should cover at least 200 feet uphill x 100 feet width along a draw. Both areas of concern were flagged in the field. Small hand dug water bars and dips, as well as small hand trenches, could also help divert water from the trail in areas where water could flow along the path of the trail due to the slope. Because this trail is of interest to the public for recreational use (i.e. under special use permit), partners might be interested in implementing these trail protection measures.

Site temp#RHT-03, view54°, hill slope erosion onto trail (frame A127-633, 07/11/2012)